

Curriculum vitae

PERSONAL INFORMATION



Theodore G. Velmachos

- Patras (Greece)
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EDUCATION AND TRAINING

06/03/2017–Present

PhD student at University of Patras

EQF level 8

University of Patras, Department of Materials Science, Patras (Greece)

Thesis' Title: Development, characterization and functionality of epoxy resin/carbide/carbon nanocomposite systems.

01/10/2015–01/03/2017

Master's Degree in Polymer Science and Technology

EQF level 7

University of Patras, Department of Physics, Patras (Greece)

Thesis' Title: Development, characterization and functional behavior of polymer matrix/ silicon carbide composite nanodielectrics.

01/10/2007–04/04/2015

Bachelor's Degree in Materials Science

EQF level 6

University of Patras, Department of Materials Science, Patras (Greece)

Thesis' Title: Development and characterization of epoxy resin/ yttrium oxide nanocomposites.

WORK EXPERIENCE

01/10/2015–01/03/2017

Research Assistant

University of Patras, Patras (Greece)

Co-supervising BSc Theses in the fields of composites and nanocomposites at the Department of Materials Science, University of Patras.

20/10/2016–15/02/2017

Teaching Assistant

University of Patras, Patras (Greece)

- Tutoring undergraduate students in Materials Science and Physics laboratories at the Department of Materials Science, Patras, Greece.

- Evaluating/marketing of students' reports from these laboratories.

-Supervisor at students' exams at the Department of Materials Science, Patras, Greece.

01/04/2016–10/07/2016

Teaching Assistant

University of Patras, Patras (Greece)

- Tutoring undergraduate students in Materials Science and Physics laboratories at the Department of Materials Science, Patras, Greece.

- Evaluating/marketing of students' reports from these laboratories.

-Supervisor at students' exams at the Department of Materials Science, Patras, Greece.

01/11/2015–25/02/2016

Teaching Assistant

University of Patras, Patras (Greece)

- Tutoring undergraduate students in Materials Science and Physics laboratories at the Department of Materials Science, Patras, Greece.
- Evaluating/marking of students' reports from these laboratories.
- Supervisor at students' exams at the Department of Materials Science, Patras, Greece.

PERSONAL SKILLS

Mother tongue(s) Greek

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
Certificate in English (University of Cambridge) Level B2					
German	B1	B1	B1	B1	B1
Zertifikat Deutsch (Goethe Institut) Level B1					

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Job-related skills

- Great experience with nanocomposite materials manufacturing.
- Great Experience with Scanning Electron Microscopy, Differential Scanning Calorimetry, Dynamic Mechanical Analysis, Broadband Dielectric Spectroscopy experimental techniques.
- Many presentations in the field of polymer nanocomposites.

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem-solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Digital skills - Self-assessment grid

-Excellent use of Origin, Universal Analysis, Windeta, Winfit programs as well as Microsoft Word, Excel and Powerpoint programs.

ADDITIONAL INFORMATION

Publications

1. "Thermomechanical Response of Fe₃O₄/PVDF nanocomposites", A. Sanida, Th. G. Velmachos, S.G. Stavropoulos, G.C. Psarras, C. Tsonos, A. Kanapitsas, N. Soin, E. Siores, Structural Integrity Procedia, 2018, 10, 91-96, <http://dx.doi.org/10.1016/j.prostr.2018.09.014>

2. "Assessing the critical multifunctionality threshold for optimal electrical, thermal, and nanomechanical properties of carbon nanotubes/epoxy nanocomposites for aerospace applications", A.-F. A. Trompeta, E. P. Koumoulos, S. G. Stavropoulos, **Th. G. Velmachos**, G. C. Psarras, C. A. Charitidis, Aerospace, vol. 6, (2019), art. no. 7 (18p). doi.org/10.3390/aerospace6010007

Conferences

Presentations in national and international conferences:

1. Development, Characterization and Functionality of Epoxy Resin – Yttrium Oxide Nanocomposites
T.Velmachos, O.Vrionis, E.C. Senis, A.C. Patsidis, G.C. Psarras
10th Hellenic Polymer Society Conference with international participation

University of Patras 4-6 December 2014

Conference proceedings p.302-304.

2. Dielectric Characterization of Yttrium Oxide/Epoxy Resin Nanocomposites

T.Velmachos, O.Vryonis, E.C. Senis, G.C. Psarras

International Workshop: Polymer Nanocomposites

National Technical University of Athens 16-17 June 2015

Book of Abstracts p.27.

3. Probing the Dielectric Response in Yttrium Oxide/Epoxy Resin Nanocomposites

T.Velmachos, O.Vryonis, E.C. Senis, G.C. Psarras

10th International Conference on Surfaces, Coatings and Nanostructured Materials

Manchester, England 13-16 September 2015

Surface & Coatings Technology (Elsevier) - Volume 380, 2015, 10.

4. Morphology, Dielectric Properties and Functionality of ZnTiO₃ / Epoxy Resin Nanocomposites

E.I. Koufakis, **T. Velmachos**, A.C. Patsidis, G.C. Psarras

International Conference "SCience in Technology"

Athens, Greece, 5-7 November 2015

Book of abstracts p.128.

5. Epoxy resin/TiC nanocomposites: Mechanical and Electrical characterization.

G. N. Tomara, K. Papalexopoulou, B. Alexiou, G.A. Visvini, C. Fiotakis, **Th. G. Velmachos**, S.G. Stavropoulos

Euromat 2017: European Congress and Exhibition on Advanced Materials and Processes

Thessaloniki, Greece 17-22 September 2017

Book of Abstracts p.10.

6. Thermomechanical response of Fe₃O₄/PVDF nanocomposites

A. Sanida, **Th. G. Velmachos**, S. G. Stavropoulos, G. C. Psarras, C. Tsonos, A. Kanapitsas, N. Soin and E. Siores

1st International Conference of the Greek Society of Experimental Mechanics of Materials

Athens, Greece 10-12 May 2018

7. Development and Characterization of Epoxy Resin/ Silicon Carbide Composite Nanodielectrics

Th. G. Velmachos, G.C. Psarras

18th European conference on Composite Materials

Athens, Greece 24-28 June 2018

Oral presentation

8. Development and Characterization of Titanium Boride/ Boron Carbide/ Polymer Matrix hybrid Nanodielectrics

A. A. Kallinikou, **Th. G. Velmachos**, G. C. Psarras

18th European conference on Composite Materials

Athens, Greece 24-28 June 2018

9. Dielectric and Mechanical Characterization of Epoxy Resin/ Silicon Carbide Nanocomposites

Th. G. Velmachos, G. C. Psarras

12th Hellenic Polymer Society International Conference

Ioannina, Greece 30 September - 3 October 2018

10. Υβριδικά Νανοδιηλεκτρικά Εποξειδικής Ρητίνης/ ZnO/ TiO₂ : Διηλεκτρική Απόκριση και Λειτουργική Συμπεριφορά

Χ. Χατζηβασιλείου, **Θ. Βέλμαχος**, Ο. Βρυώνης, Α. Πασιδης, Γ. Ψαρράς

12^ο Πανελλήνιο Επιστημονικό Συνέδριο Χημικής Μηχανικής

Αθήνα, Ελλάδα 29-31 Μαΐου 2019

11. Dielectric and Mechanical Characterization of Zirconium Carbide/Epoxy Resin Nanocomposites

Th. G. Velmachos, G. C. Psarras

XXXIV Panhellenic Conference on Solid State Physics and Materials Science

Patras, Greece 11-14 September 2019

12. Development and Characterization of Titanium Boride/Boron Carbide/Tungsten Boride Polymer Matrix Hybrid Nanodielectrics

A-K. A. Kallinikou, **Th. G. Velmachos**, G. C. Psarras

XXXIV Panhellenic Conference on Solid State Physics and Materials Science

Patras, Greece 11-14 September 2019